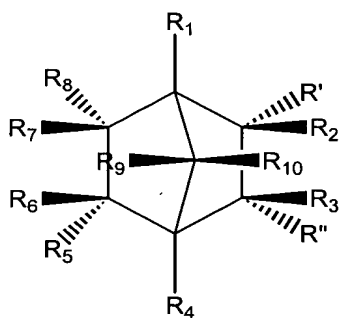


CLAIMS

That which is claimed is:

1. A thermoplastic comprising at least one small particle size nucleator compound conforming to the structure of Formula (I)

(I)

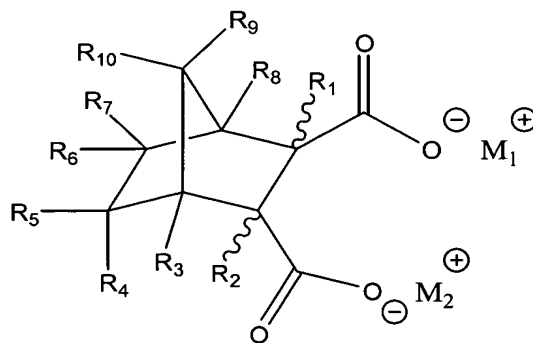


wherein R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , and R_{10} are individually selected from the group consisting of hydrogen, C_1 - C_9 alkyl, hydroxy, C_1 - C_9 alkoxy, C_1 - C_9 alkyleneoxy, amine, and C_1 - C_9 alkylamine, halogen, phenyl, alkylphenyl, and geminal or vicinal carbocyclic having up to nine carbon atoms, R' and R'' are the same or different and are individually selected from the group consisting of hydrogen, C_1 - C_{30} alkyl, hydroxy, amine, polyamine, polyoxyamine, C_1 - C_{30} alkylamine, phenyl, halogen, C_1 - C_{30} alkoxy, C_1 - C_{30} polyoxyalkyl, $C(O)-NR_{11}C(O)O-R'''$, and $C(O)O-R'''$, wherein R_{11} is selected from the group consisting of C_1 - C_{30} alkyl, hydrogen, C_1 - C_{30} alkoxy, and C_1 - C_{30} polyoxyalkyl, and wherein R''' is selected from the group consisting of hydrogen, a metal ion (such as, without limitation, Na^+ , K^+ , Li^+ , Ag^+ and any other monovalent ions), an organic cation (such as ammonium as one non-limiting example), polyoxy- C_2 - C_{18} -alkylene, C_1 - C_{30} alkyl, C_1 - C_{30} alkylene, C_1 -

C₃₀ alkyleneoxy, a steroid moiety (for example, cholesterol), phenyl, polyphenyl, C₁-C₃₀ alkylhalide, and C₁-C₃₀ alkylamine; wherein at least one of R' and R'' is either C(O)-NR₁₁C(O)O-R''' or C(O)O-R''', wherein if both R' and R'' are C(O)O-R''' then R''' both R' and R'' may be combined into a single bivalent metal ion (such as Ca²⁺, as one non-limiting example) or a single trivalent metal overbase (such as Al-OH, for one non-limiting example), and at least one anticaking agent.

2. The formulation of Claim 1 wherein said small particle size nucleating compound conforms to the structure of Formula (II)

(II)



wherein M₁ and M₂ are the same or different and are independently selected from the group consisting of metal or organic cations or the two metal ions are unified into a single metal ion (bivalent, for instance, such as calcium, for example), and R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are individually selected from the group consisting of hydrogen, C₁-C₉ alkyl, hydroxy, C₁-C₉ alkoxy, C₁-C₉ alkyleneoxy, amine, and C₁-C₉ alkylamine, halogen, phenyl, alkylphenyl, and geminal or vicinal carbocyclic having up to 9 carbon

atoms. Preferably, the metal cations are selected from the group consisting of calcium, strontium, barium, magnesium, aluminum, silver, sodium, lithium, rubidium, potassium, and the like.

3. The formulation of Claim 1 wherein said metal or organic cation is a metal cation selected from the group consisting of Group I and Group II metal ions.
4. The formulation of Claim 3 wherein said metal cation is selected from the group consisting of sodium, potassium, calcium, lithium, rubidium, barium, magnesium, and strontium, silver, zinc, aluminum.
5. The formulation of Claim 4 wherein said metal cation is sodium.
6. The thermoplastic of Claim 1 wherein said anticaking agent is selected from the group consisting of silica gel, talc, dihydrotalcite, metal carboxylic acids, and any mixtures thereof.
7. The thermoplastic of Claim 6 wherein said anticaking agent is a silica gel.
8. The thermoplastic article of Claim 1 wherein said thermoplastic comprises a polyolefin.

9. The thermoplastic article of Claim 2 wherein said thermoplastic comprises a polyolefin.
10. The thermoplastic article of Claim 6 wherein said thermoplastic comprises a polyolefin.
11. The thermoplastic article of Claim 8 wherein said polyolefin is a polypropylene.
12. The thermoplastic article of Claim 9 wherein said polyolefin is a polypropylene.
13. The thermoplastic article of Claim 10 wherein said polyolefin is a polypropylene.